**PGD11**

## VALIDITY AND RELIABILITY OF AN AMERICAN TRANSLATION OF THE ST. GEORGE'S RESPIRATORY QUESTIONNAIRE

**Barr JT, Schumacher GE, Freeman S, Collette K, PROAS Group**
PROAS Group, Northeastern University and Massachusetts Association of Cardiovascular and Pulmonary Rehabilitation, Boston, MA, USA

A self-administered, disease-specific form of health status instrument for patients with COPD is not available in America. The St. George's Respiratory Questionnaire (SGRQ) is a successful measure in Great Britain and Europe that meets these requirements, but syntax and colloquial differences make an American version necessary.
**OBJECTIVE:** To test the validity and reliability of an American translation (ATSGRQ) of the SGRQ.
**METHODS:** Two bilingual health professionals independently translated the SGRQ based on summarized input from panels of American COPD patients and American respiratory professionals. Consensus was reached on the translated version and then back-translated by two other bilingual health professionals. To establish reliability, the ATSGRQ was given to COPD patients at the beginning of a pulmonary rehabilitation program (PRP) and repeated 1 week later. To establish validity, the ATSGRQ was used with pulmonary function tests, the Medical Research Council's dyspnea scale (DYS), 6-minute walk (6MW), and Short Form Health Status Profile-36 (SF-36) at the beginning and end of PRP for 24 COPD patients.
**RESULTS:** The patients were mean age 70 yr, 40% male, mean FEV1 = 0.95. The ATSGRQ Cronbach's alpha for overall scale and symptom, activity, and impact components was respectively .87, .65, .79, .80. Test–retest correlations were .70, .60, .72, .64, respectively. Baseline correlations between total ATSGRQ and FEV1, DYS, 6MW, and SF-36 physical and mental health component scores were −.43, .54, .56, −.76, −.62. From initial to post-PRP, the symptom ATSGRQ decreased 12.6% ($p = .004$); DYS decreased 10.6% ($p = .043$).
**CONCLUSION:** Based on these preliminary data, the ATSGRQ appears to be a valid, reliable health status instrument for use in an American COPD population.

**PGD12**

## COST OF PRESCRIPTION DRUGS AND COST OF TREATMENT FAILURE FOR SINUSITIS

**Nadesan B, Cady PS, Force RW, Force WS, Culbertson VL**
Department of Pharmacy Practice and Administrative Sciences, Idaho State University, Pocatello, ID, USA

This study shows the cost of drug treatment failure, illustrating the need for initial treatment success with proper drug choice and compliance.
**OBJECTIVE:** This study examines the cost of prescription drugs used in the treatment of sinusitis and the cost of treatment failure. Economic costs are strong incentives to treat a disease effectively, reducing relapses and antibiotic resistance.
**METHODS:** The Idaho Medicaid database was used to analyze drug costs. The data was divided into 2 groups, a less than 15 but more than 1 year old group labeled Group 1. Group 2 consisted of patients 15 or more than 15 years old. The treatment was considered a failure when a patient returned within 30 days of a physician visit. Thus all treatment failures could be captured.
**RESULTS:** There were 15,568 patients (9.8%) who had at least one diagnosis of sinusitis, comprising 36.2% males and 63.8% females. The total cost of prescription drugs was $529,065. For Group 1, the total cost of drugs for the first episode was $182,499 written for 6,594 patients. Of these, 450 patients had a treatment failure, costing $17,365, of which Amoxicillin Tr/Pot. Clav. accounted for 31% of drug cost. For Group 2, the total cost of drugs for the first episode was $264,030 written for 7,107 patients. Of these, 592 patients had a treatment failure, costing $37,183. Amoxicillin Tr/Pot. Clav. accounted for 22.3% of drug cost for treatment failure.
**CONCLUSION:** The results show that more expensive drugs are used for treatment failure. This is an incentive for ensuring that a treatment succeeds with proper selection and compliance of drug therapy.

**PGD13**

## DOES THE DURATION OF PULMONARY REHABILITATION AFFECT THE MAGNITUDE OF PATIENT RESPONSE?

**Barr JT, Schumacher GE, Coleman AM, PROAS Group**
PROAS Group, Northeastern University and Massachusetts Association of Cardiovascular and Pulmonary Rehabilitation, Boston, MA, USA

**OBJECTIVE:** To determine if there is a dosage effect associated with the length of pulmonary rehabilitation (PR).
**METHODS:** We used a battery of outcome measures to quantify the amount of change that was achieved from baseline to discharge in 286 patients completing a PR program in 1 of 12 institutions participating in PROAS. The programs were of varying durations. Paired t-tests indicated overall that while the pulmonary rehabilitation programs did not yield improvements in physiologic (FEV1, FVC, % predicted FEV1) outcomes, the patients did achieve significant improvements in symptomatic (Borg score), functional (6-minute walk), general health-related quality of life [SF-36 Health Survey (SF-36)], and disease-specific HRQL [Chronic Respiratory Disease Questionnaire (CRQ)] variables.
**RESULTS:** Based on a series of stepwise multiple regressions using the amount of change in each outcome variable as the dependent variable and adjusting for the corresponding baseline value and 11 clinical and sociodemographic characteristics, the number of hours of education (HREDU, 13.5 hr ± 6.7), activities of daily living (HRADL, 2.2 hr ± 6.6), and psychosocial support (6.5 hr ± 5.6) both individually and collectively (42.4 hr ± 11.8)

generally did not contribute to explaining the magnitude of change achieved by the patients. However, the number of hours of supervised exercise (HREX, 25.4 hr ± 9.2) did contribute to explaining increases in 5 of the 8 SF-36 domains: physical function ($p = 0.027$), physical role ($p = 0.0002$), health perceptions ($p = 0.0167$), vitality ($p = 0.034$), and social function ($p = 0.0035$).
CONCLUSION: These data suggest that outcomes specifically related to pulmonary diseases are not affected by a longer duration for this type of intervention, but that broader, population-based assessments may need an additional period of intervention, or elapsed time, to detect improvement.

**PGD14**

## A HEALTH ECONOMIC ANALYSIS OF FLUTICASONE PROPIONATE, BUDESONIDE, AND BECLOMETHASONE DIPROPIONATE FOR THE TREATMENT OF MODERATE TO SEVERE ASTHMA.

Trakas K[1], Oh PI[1,2], Einarson TR[1], Shear NH[1,2]
[1]University of Toronto, Toronto, Canada; [2]Sunnybrook Health Science Centre, Toronto, Canada

OBJECTIVES: To determine the relative cost-effectiveness of the inhaled corticosteroids beclomethasone dipropionate (BDP), budesonide (BUD), and fluticasone propionate (FP), for managing moderate to severe asthma in adults over a one-year time horizon from the perspective of the Ministry of Health (MOH) in Canada.
METHODS: A single-arm meta-analysis of randomized control trials containing at least one of FP, BUD, and BDP was performed in order to derive estimates of effectiveness and tolerance. A decision tree analysis was then used to model the cost-effectiveness analysis. Only direct medical costs were included in the analysis (i.e., inpatient care, emergency visits, physician services, nursing services, drugs, diagnostic tests). The time horizon of the study was 52 weeks, precluding discounting. All costs are presented in 1996 Canadian dollars (CDN$). The cost-effectiveness was the cost per additional symptom-free day ($/SFD).
RESULTS: 69 of 398 articles were included in the meta-analysis. The Monte Carlo base case analysis showed that FP and BUD resulted in an annual cost of $1,383 and $1,147 respectively ($p < 0.01$). FP produced 216 SFDs while BUD resulted in 214 SFDs, which were not significantly different at $p = 0.01$ (corrected for multiple comparisons). BDP cost $1,343/year and yielded 213 SFD/year (BDP was excluded from the final analysis, dominated by BUD). With no difference in effectiveness, a cost-minimization analysis showed that BUD was the cost-effective alternative, costing $236 CDN less than the FP strategy.
CONCLUSIONS: Of the inhaled corticosteroids available on the MOH Formulary in Canada, BUD is a cost-effective alternative for the treatment of adults with moderate to severe asthma.

**PGD15**

## VETERANS' SATISFACTION WITH H2-RECEPTOR ANTAGONIST (H2RA) DRUG CONVERSION

Department of Veterans Affairs Medical Center, San Francisco, CA, USA

The Veterans Health Administration awarded national purchasing contracts for the H2RAs to cimetidine and famotidine. Our patients were taking ranitidine but were switched to one of the two contracted agents. The conversion process was performed by a pharmacist via local protocol. Patients were contacted by phone and mailed a handout explaining the rationale for the medication switch.
OBJECTIVES: To evaluate how patients feel concerning their new H2RA and the way we informed them of the conversion.
METHODS: In this cross-sectional study, a "generic drug conversion" patient satisfaction questionnaire was mailed to 295 patients converted to either cimetidine (53 patients) or famotidine (242 patients).
RESULTS: There were 181 returned questionnaires, a 61.3% total response rate. Patient responses were as follows: 69.4% answered that their new H2RA works the same or better than ranitidine; 16.4% answered that their new H2RA had more side effects/problems than ranitidine; 80.4% answered that the conversion process was clearly explained to them; 13.3% of patients contacted the VA concerning their new H2RA medication; 76.4% answered that the way they were informed of the conversion was good to excellent. The only difference found, after subgroup analysis, was that 48.2% of the cimetidine patients subjectively rated it to work worse than ranitidine, versus 27.1% of the famotidine patients, using their own criteria (Chi-square, $p < 0.028$; OR 2.51).
CONCLUSIONS: The data suggest that the majority of the patients believe their new H2RA works well for them and are satisfied with the conversion process. Of the patients who rated their new H2RA to work worse than ranitidine, there is a 2.51 times greater chance that they were taking cimetidine as compared to patients whose H2RA worked worse than ranitidine and were taking famotidine.